

ART. VIII.—*Suggestions for the Introduction of Animals and Agricultural Seeds into Victoria.* By W. LOCKHART MORTON, Esq.

[Read before the Royal Society of Victoria, October 8th, 1860.]

THE subject which I have the honor this evening of bringing under the notice of this Society, bears directly upon the material welfare and advancement of this colony; and it is thus invested with more than ordinary interest, claims more than ordinary mention, and deserves that full consideration which I trust it will receive.

For a lengthened period the condition of this country has occupied much of my deepest thought, and I have come to this conclusion, that if lasting prosperity is to be attained at all, it must be through industry applied to the cultivation of the soil, as well as to gold-mining; not indeed for the growth of cereals, to any great extent, because our market is too limited for that; but for the production of all such articles as are valued and cultivated in other lands, and for which a good return could be obtained by exportation now, or by the establishment of manufactures hereafter. Actuated by this conviction, I began to endeavour to find out what seeds and plants are cultivated, and what animals are reared and kept with the greatest amount of profit in other countries of the world. A little inquiry was sufficient to make known that nearly every country is in possession of seeds and animals of great value altogether unknown to the rest of the world. The question next to be settled was, how can this colony obtain the valuable seeds, plants, and animals, of other countries. It occurred to me that the only proper way to accomplish so desirable an end was to suggest the formation of an association for the express purpose; hitherto, however, I have met with no success in this matter. I therefore determined to try a different course, which will be made known and best explained by the following letter, which I addressed to His Excellency the Governor:—

“ To His Excellency Sir Henry Barkly, K.C.B., Governor of Victoria, &c.

“ SIR,—Knowing how deep an interest you feel in whatever is calculated to benefit the Colony, and Australia generally, I have the honor

to lay before Your Excellency the following proposal, bearing upon the introduction of new and valuable seeds, plants, and animals into this colony.

“Every country is in possession of distinct forms of vegetable or animal life, of perhaps great value, yet known only to men of science, whereas, if some means were adopted for their distribution throughout the world, a universal benefit would be conferred upon mankind.

“In order that this object may be attained, for the advantage of the world generally, and this colony particularly, I have the honor to suggest that Your Excellency should forward a request to the Foreign Office, that a circular may be sent, in the name of Your Excellency, to the Ministers of Foreign States, and to the English Consuls at foreign ports, containing a proposal that collections should be made in each country of all its most valuable seeds, and that a portion of each variety should be forwarded to Your Excellency, upon the understanding that this colony will most gladly reciprocate.

“I have the honor of further suggesting, that if a list of questions, such as are hereto attached, were forwarded along with the circular, the most valuable information might be distributed throughout the world, by the answers received.

“I have the honor to be,

“Your Excellency’s most obedient servant,

“WILLIAM LOCKHART MORTON.”

LIST OF QUESTIONS TO BE ANSWERED.

What animals are esteemed of greatest value in your country, and for what quality are they so esteemed?

Could they be procured, and with what facilities?

What valuable seeds and plants grow in your country; and which are esteemed and cultivated most?

Will you be good enough to state, in reference both to animals and seeds, every particular necessary for the proper management of the former, and what description of soil and climate, and what mode of cultivation, are most suitable for the latter?

Will you please to give immediate instructions to some competent authority to make, without delay, a full collection of all the most valuable seeds grown in your country—inclusive of the most esteemed agricultural seeds generally cultivated for cereal crops, and forward the same (carefully packed to stand the long sea transit) to His Excellency the Governor of Victoria, who will in exchange send to your country a full collection of Australian seeds?

In answer to the above communication, I promptly received the following letter from His Excellency’s Private Secretary:

“Private Secretary’s Office,

“September 27th, 1860.

“SIR,—I am directed by the Governor to state, with reference to your proposal for the introduction of new and valuable plants, seeds, and animals into this colony, that His Excellency fully concurs with you as to the impor-

tance of setting a movement of the sort on foot, but would suggest that you should endeavour to secure the co-operation of the Royal Society of Victoria; in whose name applications might be made with a greater amount of weight, and under whose auspices the best mode of proceeding might be arranged.

The aid also of the Legislature would seem to be needed, as the collection and transmission *even of seeds* would entail considerable trouble and expense, which it would scarcely be sufficient to meet by holding out a prospect of reciprocity hereafter.

“ I am, Sir, your obedient servant,

“ O. F. TIMINS, Private Secretary.

“ Mr. William Lockhart Morton.”

It is only within the last few days that I have learned that in the year 1854 a society was formed in France, and during the past year, one in England, for attaining the same objects as those embodied in the foregoing suggestions. I do not now think that it will be necessary to organize such a society here, if this Society will agree to take the matter up, or form a section for that purpose; in which case immediate communication might be entered into with the French and English societies. But, even if this should be done, I think it would nevertheless be desirable to follow up the suggestions which I had the honour of offering to His Excellency, because they seem to point out the best channel for obtaining the most full information; and, as other existing societies may possibly not have thought of the same means, a vast amount of valuable information may be thereby gathered, for their use as well as for ours.

It may be thought that in Australia there are very few animals or seeds which could be given in exchange for those of other countries; but, if Australian productions are deficient in intrinsic value, they make up for that want in their singularity. There are in Australia more useful plants and animals, however, than common observers are aware of. Throughout tropical and extropical Australia are several plants which may hereafter be regarded as highly valuable for their medicinal virtues. Amongst the feathered tribes, the genus *Columba* is well represented. Perhaps the largest and smallest varieties of pigeons to be found in the world are natives of this continent. In the Wonga Wonga we have a pigeon nearly equal in size to the common fowl, while there is another sort so small that it resembles the house sparrow. These, and some other varieties, as well as a small pheasant, might be domesticated. They could be easily obtained from Rockhampton. There is also to be got the brush turkey, which, like our own lowen, lays its eggs in heaps of sand, mixed with vegetable

matter, to produce fermentation, and thereby generate heat. In addition to the many interesting seeds and plants, as well as fruits discovered by Dr. Leichhardt—amongst which may be mentioned the bean of the Mackenzie, which that distinguished explorer considered as a good substitute for coffee, the clustering fig tree, and the seeds producing the same effect as cantharides when applied to the skin; it is now known that on some of the beautiful islands of the north-east coast an excellent ground-nut grows in the utmost profusion. In reference to the advantages that would be secured to this colony by the introduction of seeds and animals from other parts of the world, I would beg leave to mention the field that exists here for the growth of those trees upon which the silk-worm feeds, and for the production of silk. We all know that the castor oil tree, or the *Palma Christi*, grows well in this colony, and it is on the leaves of this tree that the wild Indian silk-worms are fed. But by far the best variety of silk-worms we can obtain is one that can be readily got from the province of Canton, in China. This description of worm feeds upon a species of *Xanthoxylum*, which, on account of its aromatic and pungent properties, is generally called a pepper tree. Its bark and capsular fruit is much used as a remedy for tooth-ache, and also instead of pepper. This tree or shrub, then, would be of value on its own account, but the more so because it yields the proper food for those silk-worms which produce the best Chinese silk, and in such quantity that, in abundance as well as in quality, this species of worm excels all others. But what renders this species particularly valuable for this colony is the circumstance that little attention requires to be bestowed upon the worms. They are wild silk-worms, and do better when left to themselves. Another important fact connected with them is, that the same worm will do equally well on the leaves of the ash tree (which in China is nearly identical with the English ash tree).

I may also allude to an important variety of sheep that might be obtained from Ladakh, or Middle Thibet, a high and rugged country north of the Punjab. This is the Purek sheep; when full grown it is scarcely the size of a South-down lamb of five or six months old, yet in the fineness and weight of its fleece, and in the flavour of its mutton, added to its peculiarities of feeding and constitution, it yields not, says a traveller, in merit to any race of sheep hitherto discovered. It thrives where vegetation is hardly discernible. It gives two lambs within the twelve months, is shorn twice

in the same period, and yields on an average three pounds of wool per annum.

The black Astracan sheep is another variety of sheep that might be introduced. This produces wool only inferior to that of Cashmere. It feeds on furze or dry grass. Its flesh is sweet and well-flavoured. It is found in Karakool, a small canton between Bokhara and the Oxus; but it has been alleged that it will thrive in no other place—that it has been transported to Persia and other countries without success.

The Yak (the *bos poephagus* or *poephagus grumiensis*) is another valuable animal. This animal, sometimes called the grunting ox, is found in Thibet. It is a first-rate milker. The males make good workers or beasts of burden. It has long pendant hair, of which a kind of coarse cloth is made. The skins, when tanned, form excellent rugs. The skins of the young are curly, very beautiful, and are much esteemed.

I cannot lose the present opportunity of remarking that it is possible to think so much of those things we have not got, that the value of those things we actually have may be overlooked. I think the fine-woolled merino sheep furnishes a case in point. Instead of trying to improve the qualities of this valuable animal, it is about to be displaced by coarse-woolled varieties. The result will be felt in a few years, when, by the increase of this description of stock, without a corresponding augmentation of the population, the fleece must assuredly come to be regarded as of more value than the carcass.

Again, we have already in the colony many things the value of which is known only to the scientific, or not recognized by the practical agriculturist, as of any value whatever. The sunflower, the *Palma Christi*, and the *Agave Americana* are examples of this. All these grow well here. The latter, as the American aloe, is to be seen in our gardens, growing in the utmost vigour and luxuriance, but it is not esteemed as of any value, yet it may be cultivated as a hedge row; the leaves may be used, as they are in Spain, as scouring paper; their essence may be made into a soap that is equally efficient in salt and in fresh water; and from them a valuable medicine also is extracted; whilst an admirable bed can be manufactured from the fibres of the leaves. A sample of this fibre, both in its natural colour and dyed black, is at present on the table. This is an article only recently introduced into the colony, by Mr. White, opposite to the Hospital, and, apparently, is superior to much of the horse-hair now used for the general purposes of the upholsterer.